

Title (en)

Sialon insert and cutting tool equipped therewith

Title (de)

Sialon-Einsatz und damit ausgestattetes Schneidewerkzeug

Title (fr)

Insert en sialon et outil de découpe doté de celui-ci

Publication

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Application

EP 11180944 A 20051222

Priority

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- JP 2005134157 A 20050502
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Abstract (en)

[origin: EP1837105A1] This invention provides a long-life Sialon insert, the cutting edge of which is resistant to wear and hard to fracture, and a cutting tool equipped with the Sialon insert. Provided are a Sialon insert made of a Sialon sintered body including a Sialon phase comprising an \pm -Sialon and a 2 -Sialon, and at least one element, originating from a sintering aid, selected from the group consisting of Sc, Y, Dy, Yb, and Lu in an amount of 0.5 to 5 mol% in terms of an oxide thereof, wherein an \pm -value, which shows the proportion of the \pm -Sialon in the Sialon phase, is from 10% to 40%; the 2 -Sialon has a value of Z from 0.2 to 0.7 wherein Z is a variable of the formula $\text{Si } 6\text{-Z Al } Z \text{ O } Z \text{ N } 8\text{-Z}$ and within a range: $0 < Z \leq 4.2$; and the sintered body has an average thermal expansion coefficient of $3.5 \times 10^{-6} / \text{K}$ or less at temperatures of room temperature to 1000°C , and a thermal conductivity of $10 \text{ W/m}\cdot\text{K}$ or more at temperatures of room temperature to 1000°C , and a cutting tool comprising a holder equipped with the Sialon insert.

IPC 8 full level

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Citation (opposition)

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DE FR SE

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